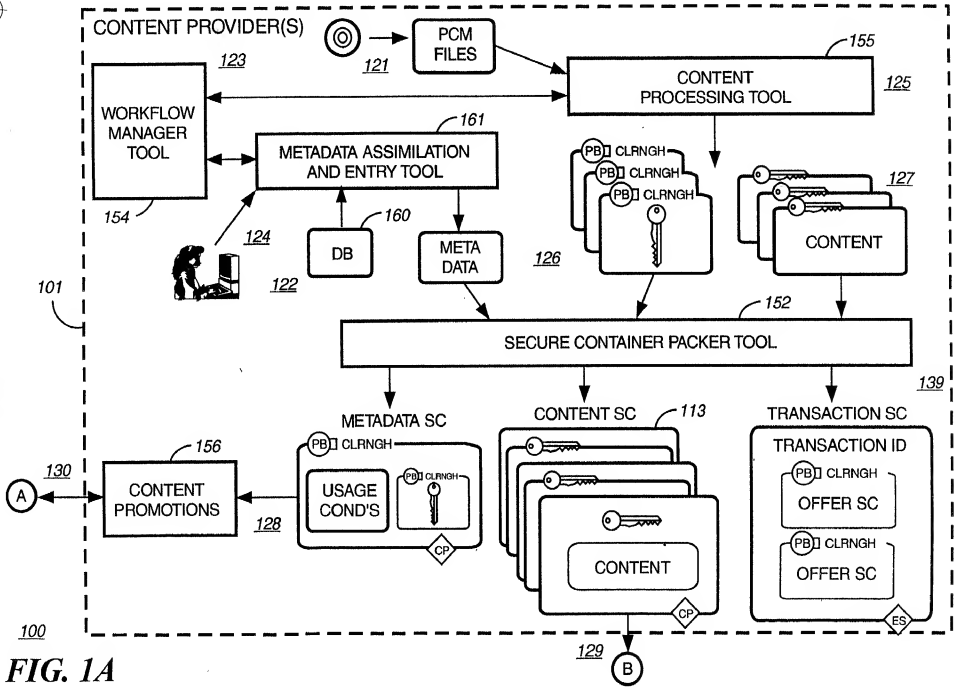

CONTENT PROVIDER(S)
123
121
PCM FILES
155
CONTENT PROCESSING TOOL
125
WORKFLOW MANAGER TOOL
154
161
METADATA ASSIMILATION AND ENTRY TOOL
PB CLRNGH
PB CLRNGH
PB CLRNGH
127
CONTENT
124
160
DB
META DATA
126
122
101
152
SECURE CONTAINER PACKER TOOL
139
METADATA SC
CONTENT SC
113
TRANSACTION SC
TRANSACTION ID
PB CLRNGH
OFFER SC
PB CLRNGH
OFFER SC
156
130
A
CONTENT PROMOTIONS
128
USAGE COND'S
PB CLRNGH
CP
CONTENT
CP
ES
100
129
B

FIG. 1A

TOE280" TOH8E660

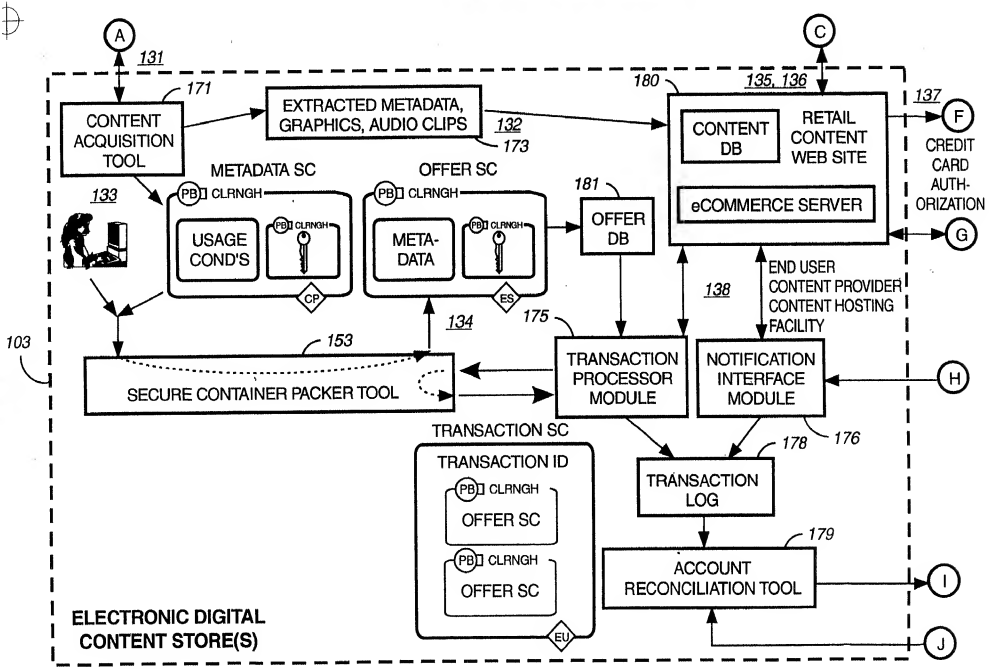


FIG. 1B 100

TOE280' TOH6E660

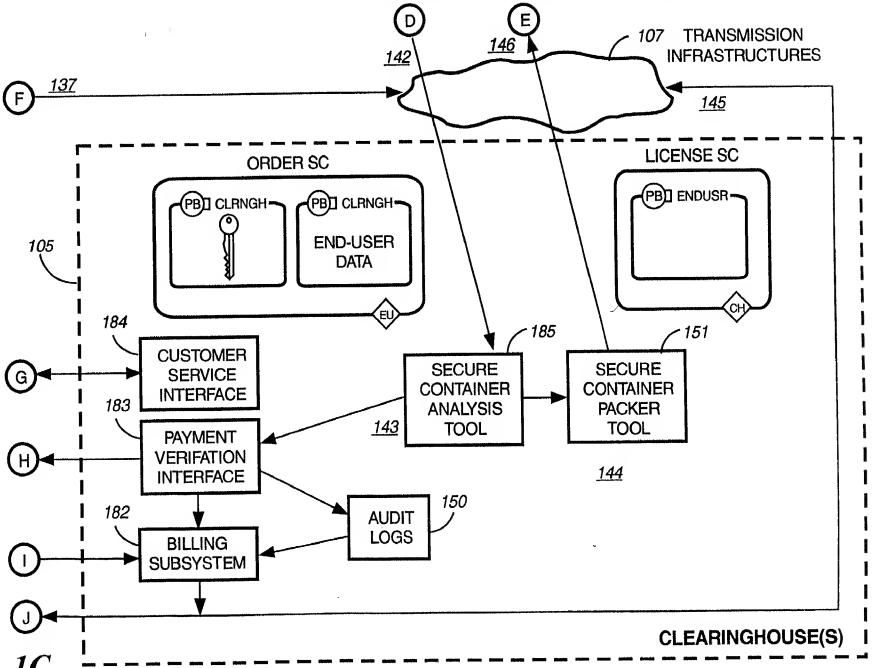
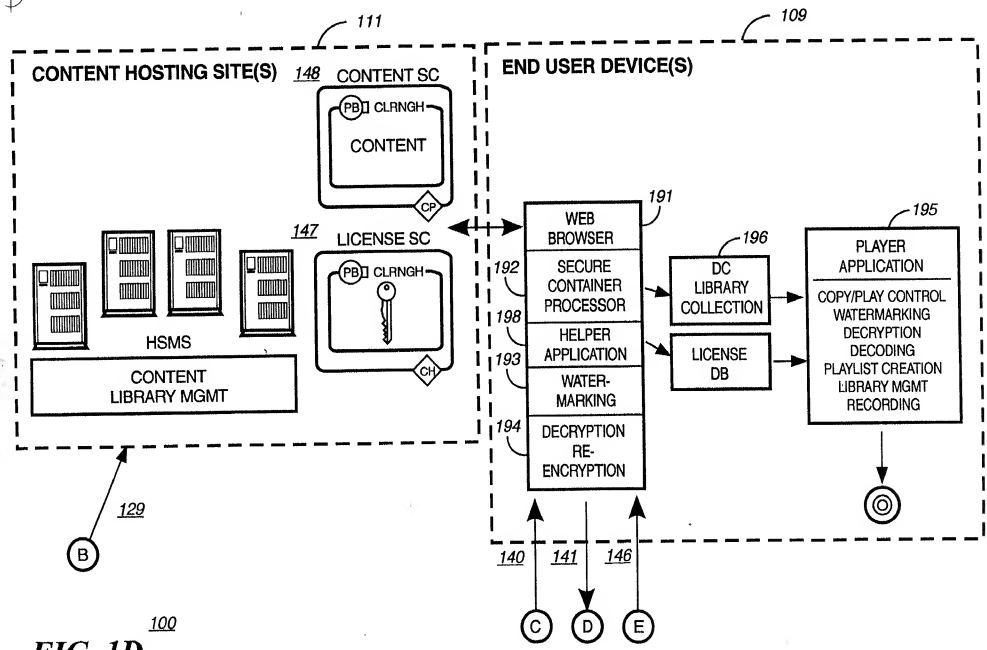


FIG. 1C

TOE280 T0h8E660



100

FIG. 1D

TOE280 T0+8E660

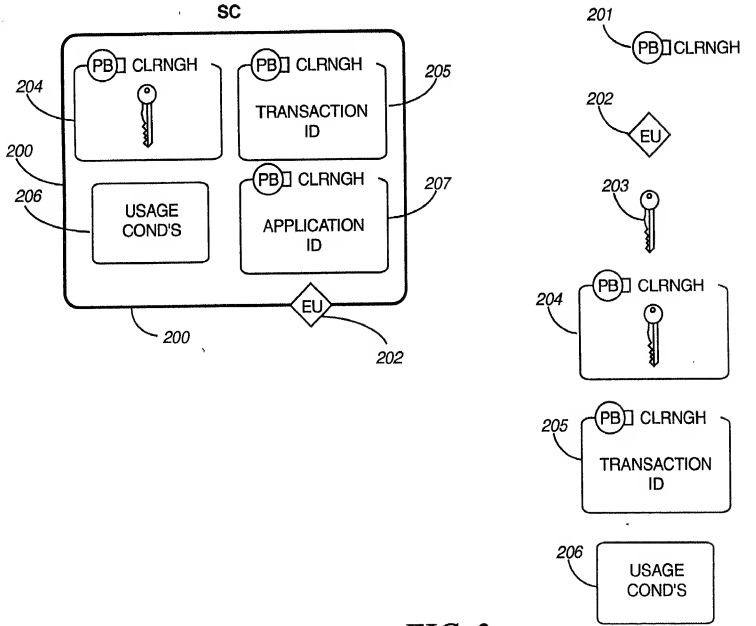


FIG. 2

TOE280 TOM8E660

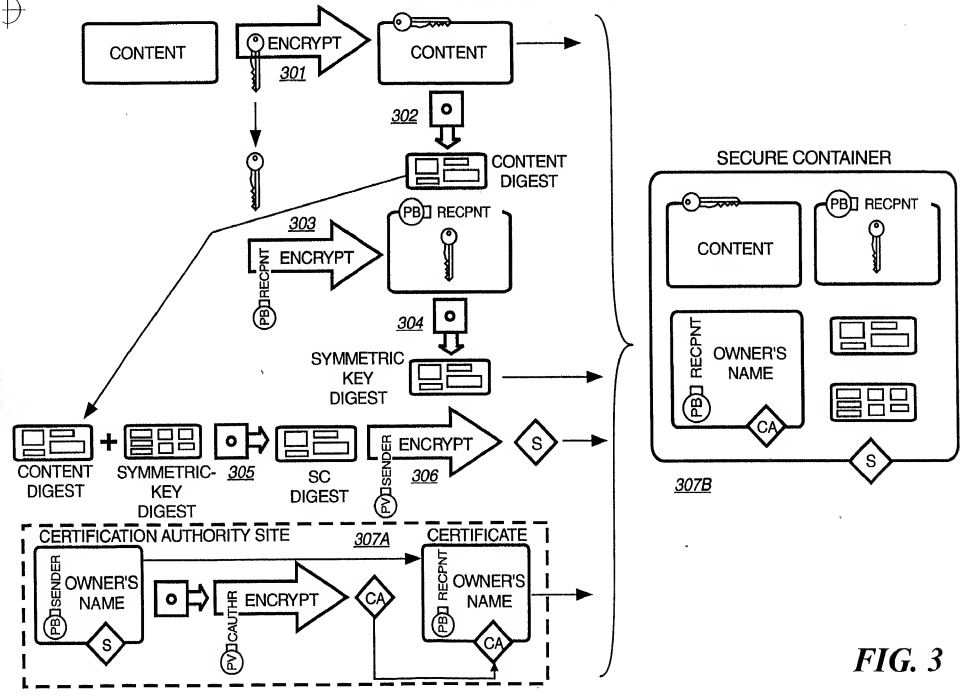


FIG. 3

TDE280 TON8E660

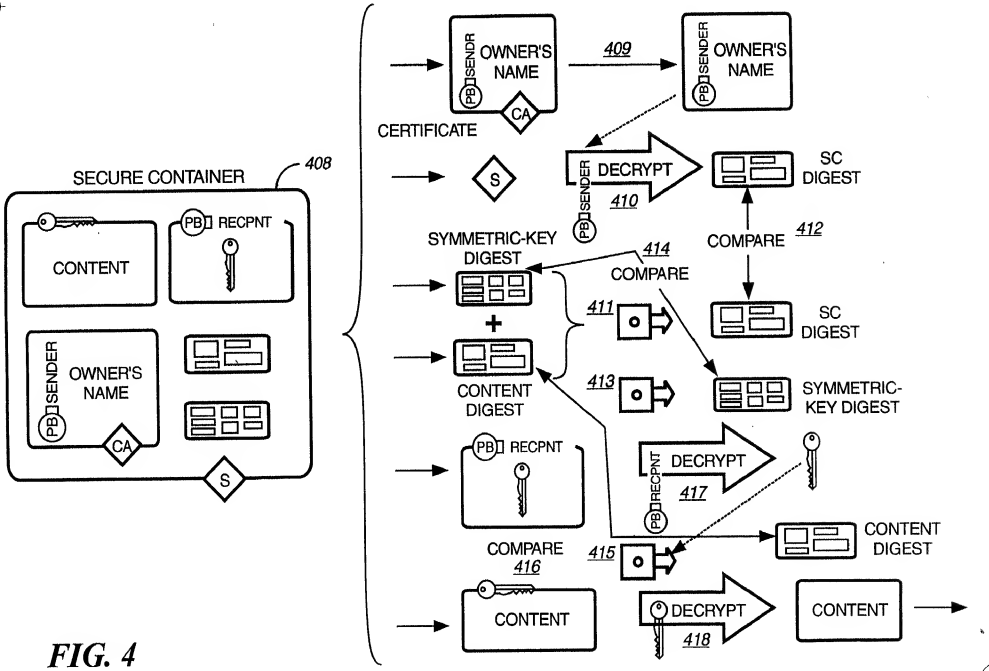


FIG. 4

TDE280 TDM6660

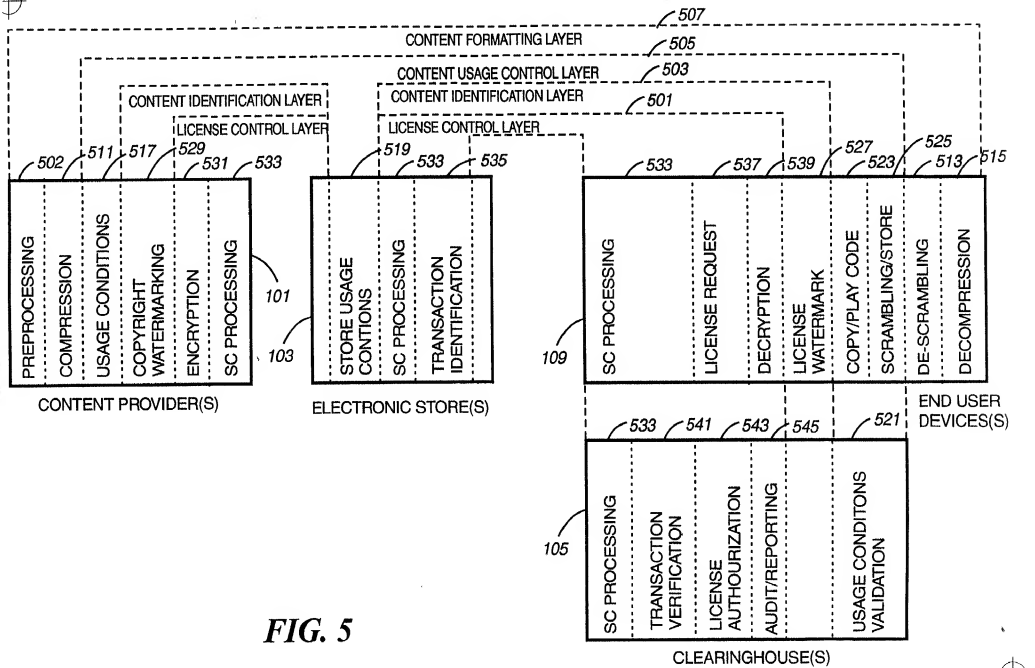


FIG. 5

TOE280 F0+8E660

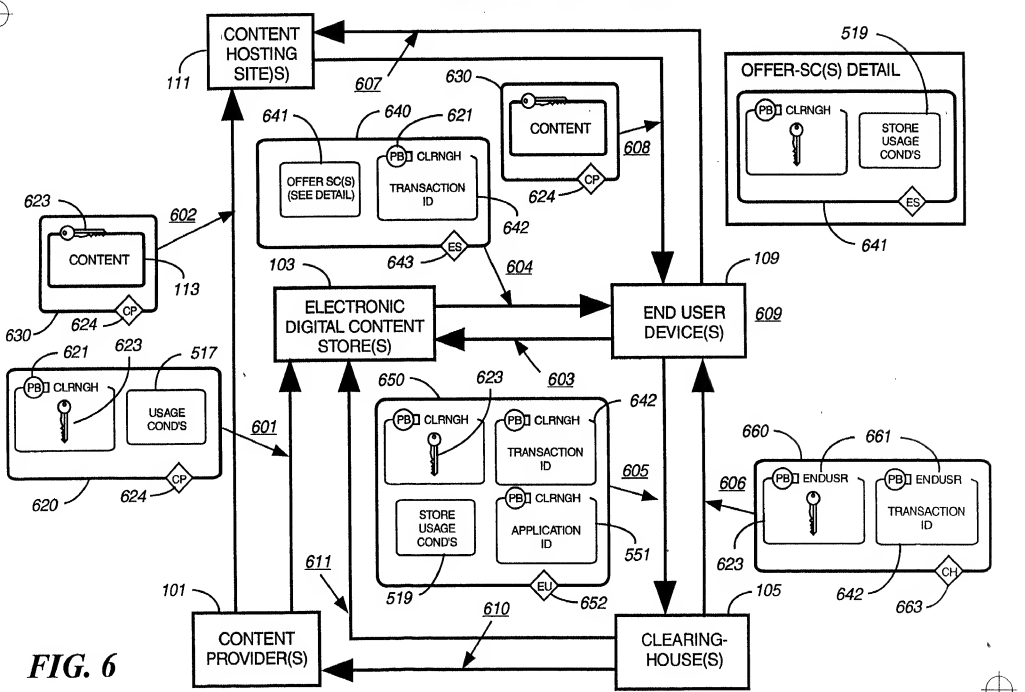


FIG. 6

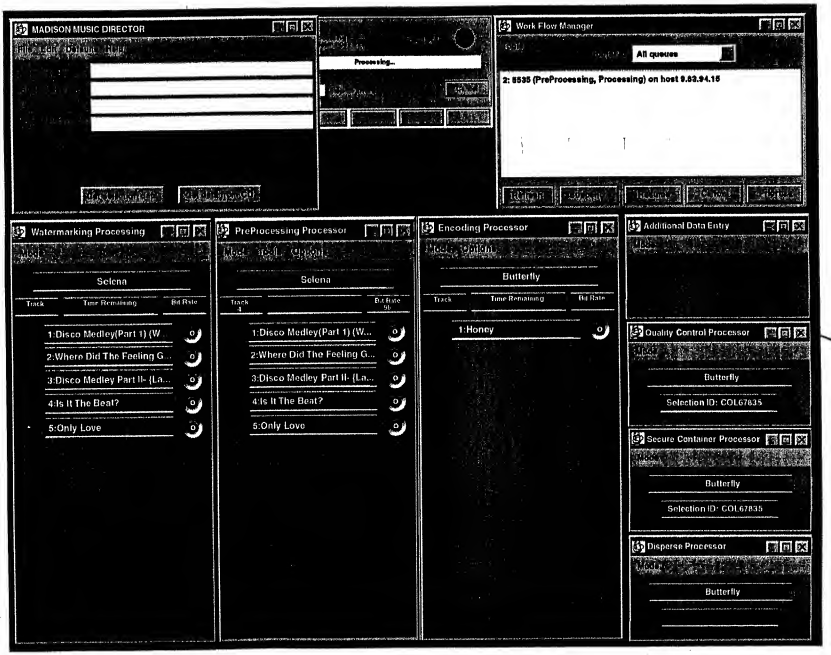

MADISON MUSIC DIRECTOR
Processing...
Work Flow Manager
All queues
2: 8535 (PreProcessing, Processing) on host 9.83.94.16
Watermarking Processing
Selena
Track
Time Remaining
Bit Rate
1:Disco Medley(Part 1) (W
2:Where Did The Feeling G...
3:Disco Medley Part II- (La...
4:Is It The Beat?
5:Only Love
PreProcessing Processor
Selena
Track
Bit Rate
1:Disco Medley(Part 1) (W...
2:Where Did The Feeling G...
3:Disco Medley Part II- (La...
4:Is It The Beat?
5:Only Love
Encoding Processor
Butterfly
Track
Time Remaining
Bit Rate
1:Honey
Additional Data Entry
Quality Control Processor
Butterfly
Selection ID: COL67835
Secure Container Processor
Butterfly
Selection ID: COL67835
Disperse Processor
Butterfly
700

FIG. 7

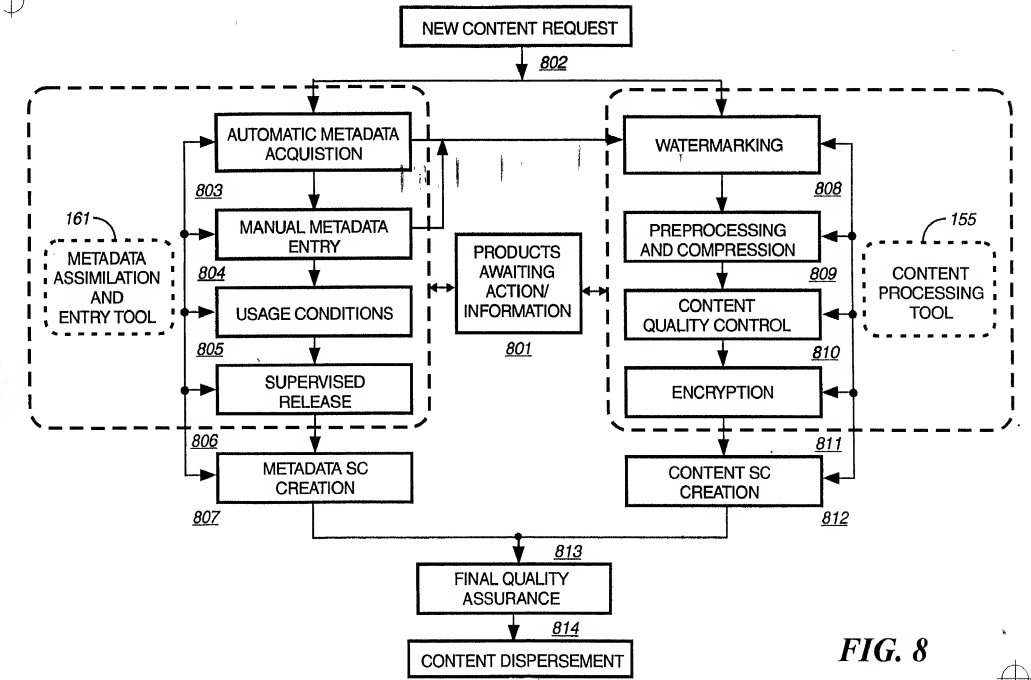

NEW CONTENT REQUEST
802
AUTOMATIC METADATA ACQUISTION
803
MANUAL METADATA ENTRY
804
USAGE CONDITIONS
805
SUPERVISED RELEASE
806
METADATA SC CREATION
807
161
METADATA ASSIMILATION AND ENTRY TOOL
PRODUCTS AWAITING ACTION/ INFORMATION
801
WATERMARKING
808
PREPROCESSING AND COMPRESSION
809
CONTENT QUALITY CONTROL
810
ENCRYPTION
811
CONTENT SC CREATION
812
155
CONTENT PROCESSING TOOL
813
FINAL QUALITY ASSURANCE
814
CONTENT DISPERSEMENT

FIG. 8

TOZ280 T0A8E660

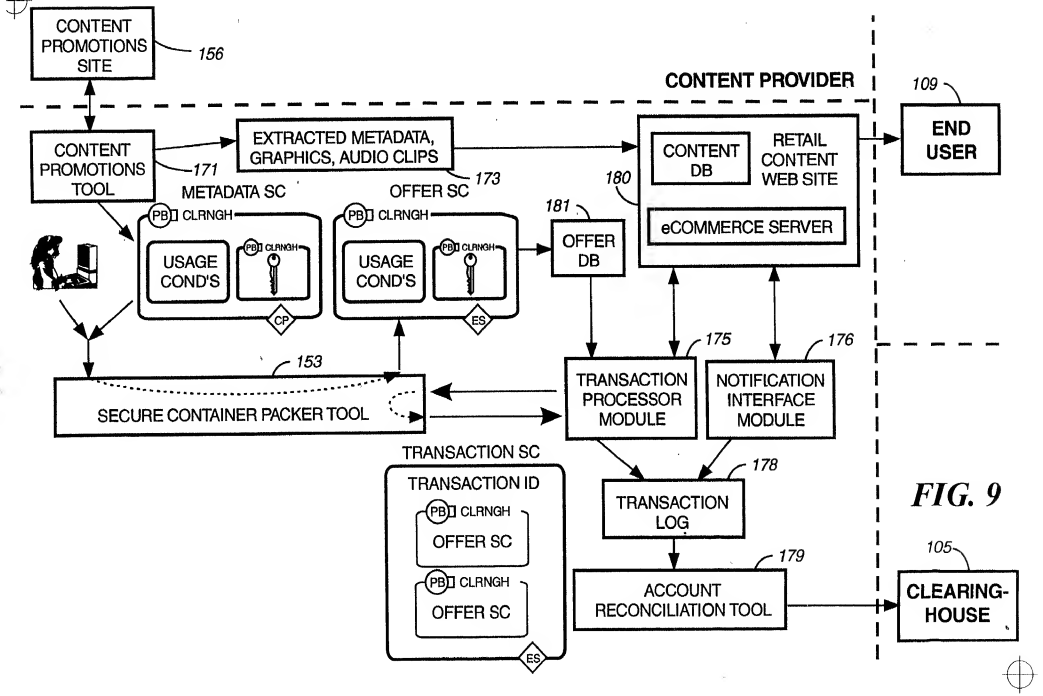


FIG. 9

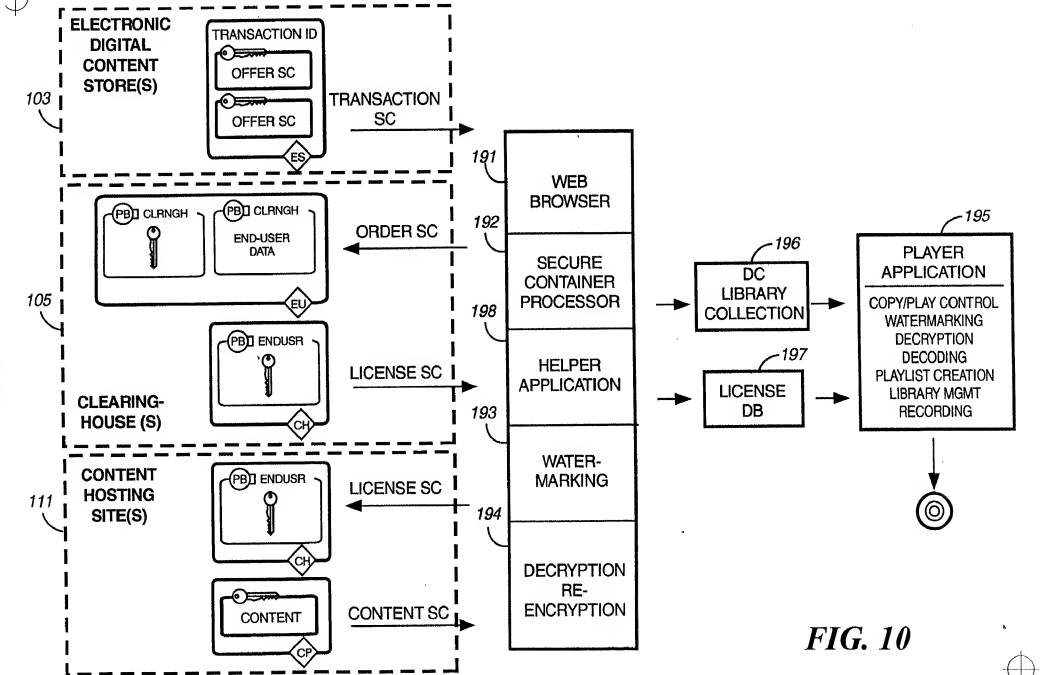

ELECTRONIC DIGITAL CONTENT STORE(S)
103
TRANSACTION ID
OFFER SC
OFFER SC
ES
TRANSACTION SC
CLEARING-HOUSE (S)
105
PB CLRNGH
PB CLRNGH
END-USER DATA
EU
ORDER SC
PB ENDUSR
CH
LICENSE SC
CONTENT HOSTING SITE(S)
111
PB ENDUSR
CH
LICENSE SC
CONTENT
CF
CONTENT SC
191
WEB BROWSER
192
SECURE CONTAINER PROCESSOR
198
HELPER APPLICATION
193
WATER-MARKING
194
DECRYPTION RE-ENCRYPTION
196
DC LIBRARY COLLECTION
197
LICENSE DB
195
PLAYER APPLICATION
COPY/PLAY CONTROL
WATERMARKING
DECRYPTION
DECODING
PLAYLIST CREATION
LIBRARY MGMT
RECORDING

FIG. 10

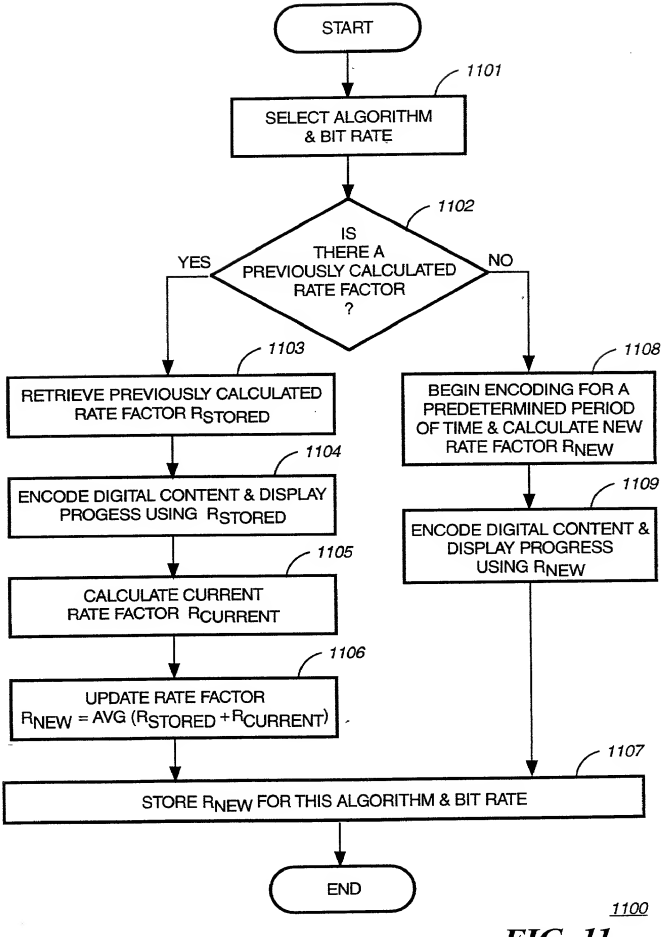

START
1101
SELECT ALGORITHM & BIT RATE
1102
IS THERE A PREVIOUSLY CALCULATED RATE FACTOR ?
YES
NO
1103
RETRIEVE PREVIOUSLY CALCULATED RATE FACTOR R_{STORED}
1104
ENCODE DIGITAL CONTENT & DISPLAY PROGESS USING R_{STORED}
1105
CALCULATE CURRENT RATE FACTOR $R_{CURRENT}$
1106
UPDATE RATE FACTOR $R_{NEW} = AVG (R_{STORED} + R_{CURRENT})$
1108
BEGIN ENCODING FOR A PREDETERMINED PERIOD OF TIME & CALCULATE NEW RATE FACTOR R_{NEW}
1109
ENCODE DIGITAL CONTENT & DISPLAY PROGRESS USING R_{NEW}
1107
STORE R_{NEW} FOR THIS ALGORITHM & BIT RATE
END
1100

FIG. 11

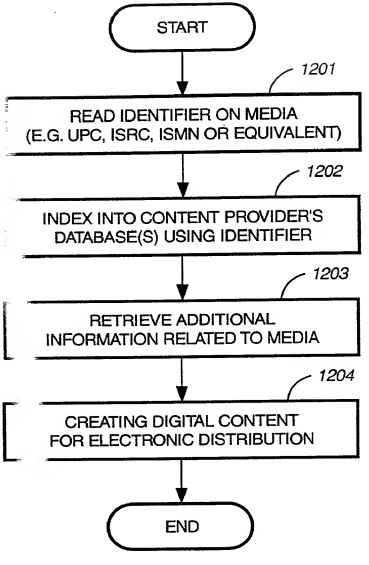

START
1201
READ IDENTIFIER ON MEDIA
(E.G. UPC, ISRC, ISMN OR EQUIVALENT)
1202
INDEX INTO CONTENT PROVIDER'S
DATABASE(S) USING IDENTIFIER
1203
RETRIEVE ADDITIONAL
INFORMATION RELATED TO MEDIA
1204
CREATING DIGITAL CONTENT
FOR ELECTRONIC DISTRIBUTION
END

FIG. 12

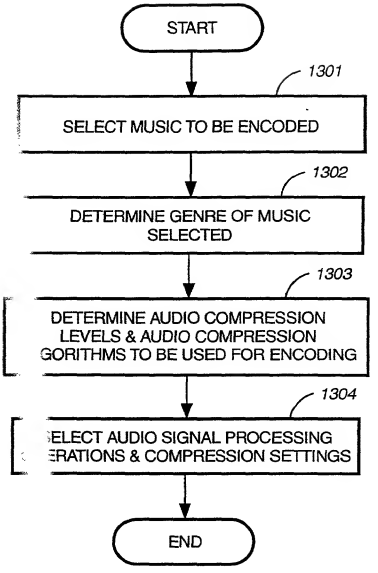

START
1301
SELECT MUSIC TO BE ENCODED
1302
DETERMINE GENRE OF MUSIC SELECTED
1303
DETERMINE AUDIO COMPRESSION LEVELS & AUDIO COMPRESSION GORITHMS TO BE USED FOR ENCODING
1304
ELECT AUDIO SIGNAL PROCESSING ERATIONS & COMPRESSION SETTINGS
END

FIG. 13

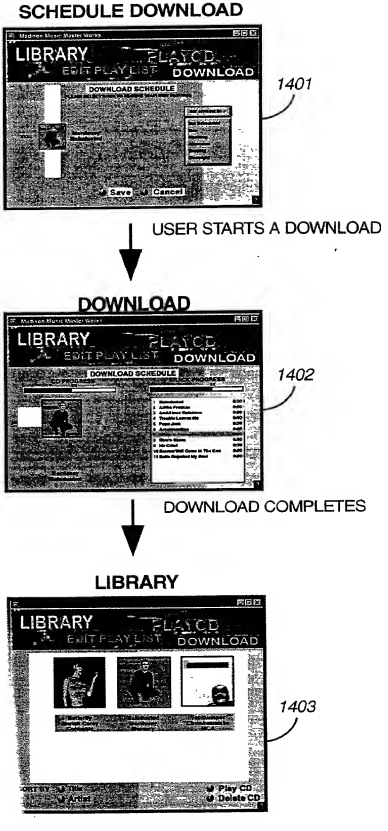

SCHEDULE DOWNLOAD
LIBRARY
PLAYCD
EDIT PLAYLIST
DOWNLOAD
DOWNLOAD SCHEDULE
Save
Cancel
1401
USER STARTS A DOWNLOAD
DOWNLOAD
LIBRARY
PLAYCD
EDIT PLAYLIST
DOWNLOAD
DOWNLOAD SCHEDULE
1402
DOWNLOAD COMPLETES
LIBRARY
LIBRARY
PLAYCD
EDIT PLAYLIST
DOWNLOAD
Play CD
Delete CD
1403

FIG. 14

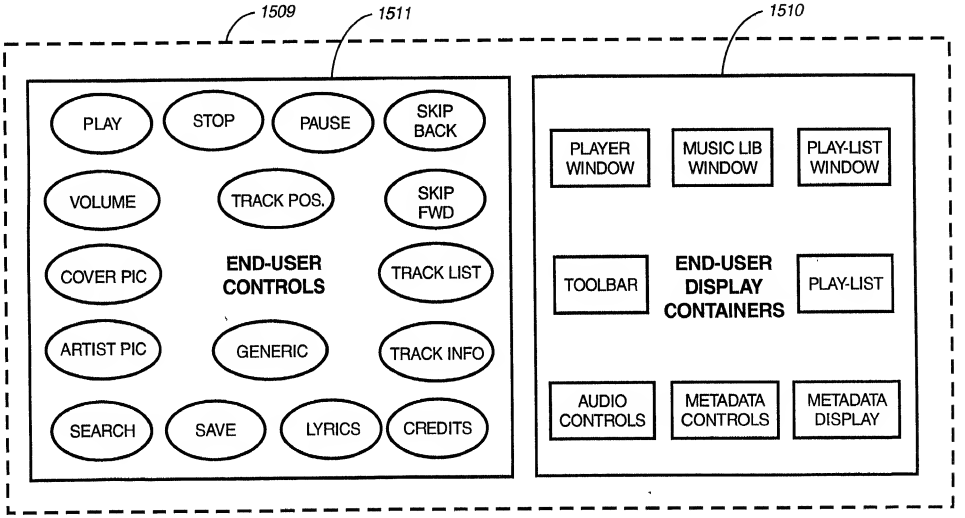

1509
1511
1510
PLAY
STOP
PAUSE
SKIP BACK
VOLUME
TRACK POS.
SKIP FWD
COVER PIC
END-USER CONTROLS
TRACK LIST
ARTIST PIC
GENERIC
TRACK INFO
SEARCH
SAVE
LYRICS
CREDITS
PLAYER WINDOW
MUSIC LIB WINDOW
PLAY-LIST WINDOW
TOOLBAR
END-USER DISPLAY CONTAINERS
PLAY-LIST
AUDIO CONTROLS
METADATA CONTROLS
METADATA DISPLAY

FIG. 15A

TOE280 TOM8E660

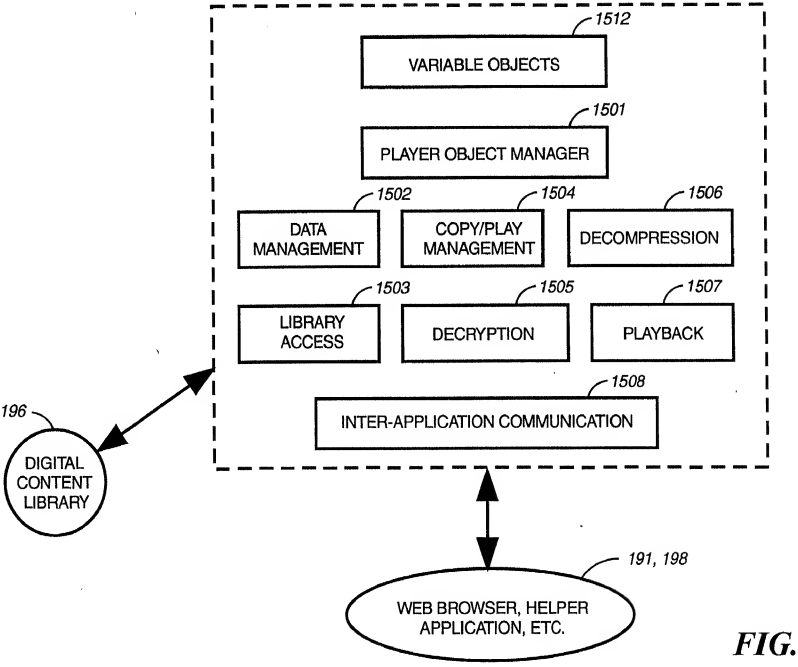


FIG. 15B

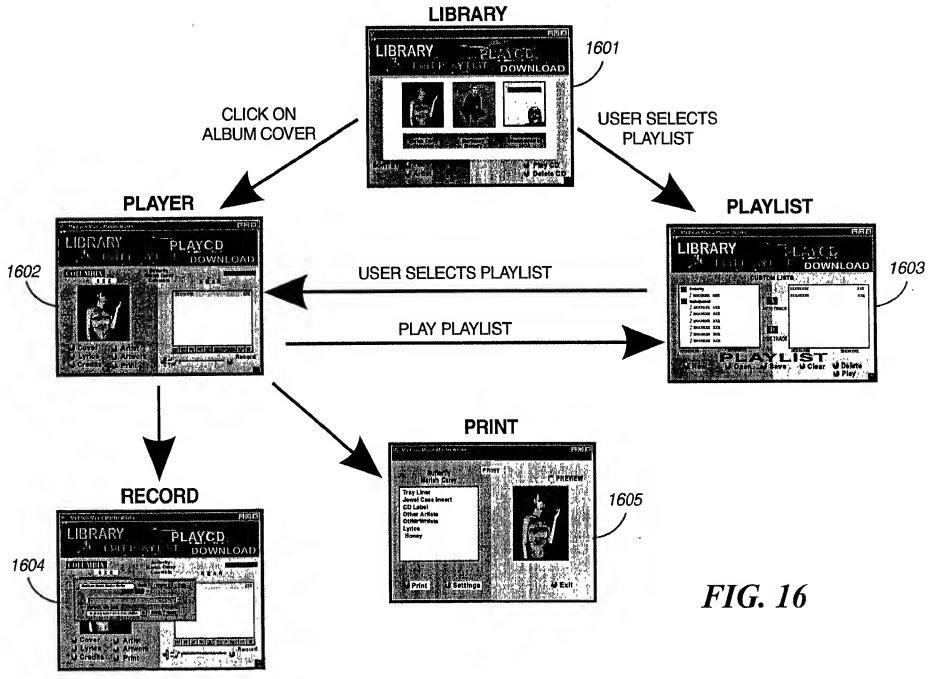

LIBRARY
1601
CLICK ON ALBUM COVER
USER SELECTS PLAYLIST
PLAYER
PLAYLIST
1602
USER SELECTS PLAYLIST
1603
PLAY PLAYLIST
PRINT
RECORD
1605
1604

FIG. 16

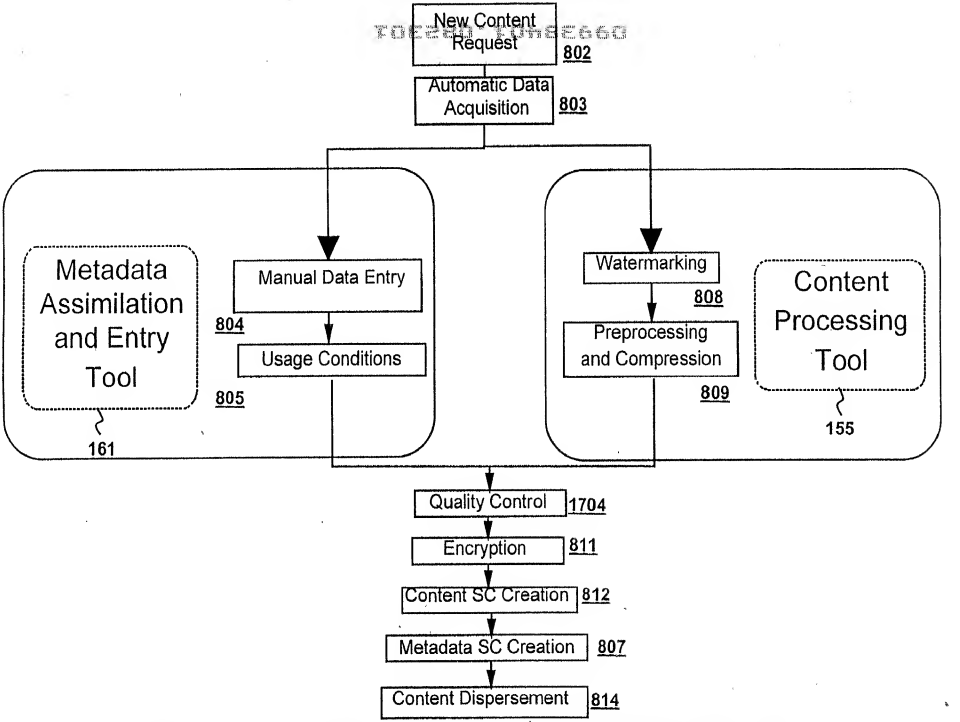
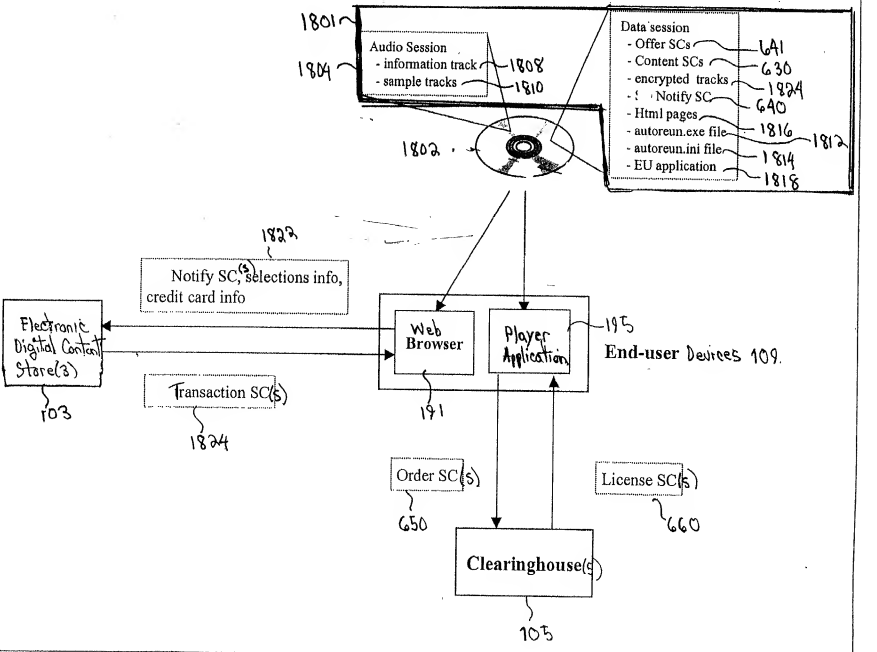


FIG. 17 Alternate Embodiment for the Work Flow Manager

TOE280 TO+8E660

FIG. 18 **Buying Transaction Flow With a Super-distribution CD**



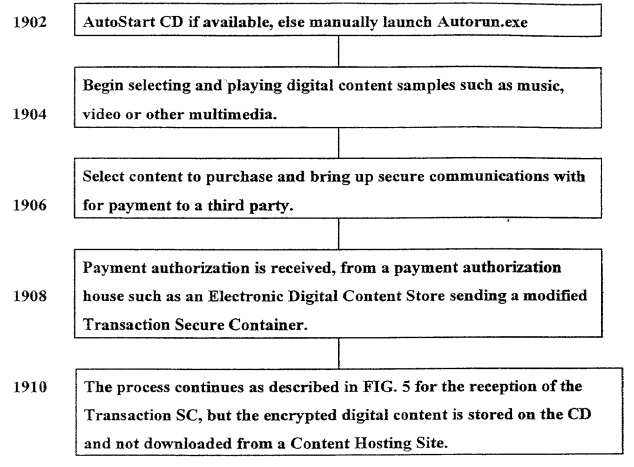

1902
AutoStart CD if available, else manually launch Autorun.exe
Begin selecting and playing digital content samples such as music,
1904
video or other multimedia.
Select content to purchase and bring up secure communications with
1906
for payment to a third party.
Payment authorization is received, from a payment authorization
1908
house such as an Electronic Digital Content Store sending a modified
Transaction Secure Container.
1910
The process continues as described in FIG. 5 for the reception of the
Transaction SC, but the encrypted digital content is stored on the CD
and not downloaded from a Content Hosting Site.

FIG. 19

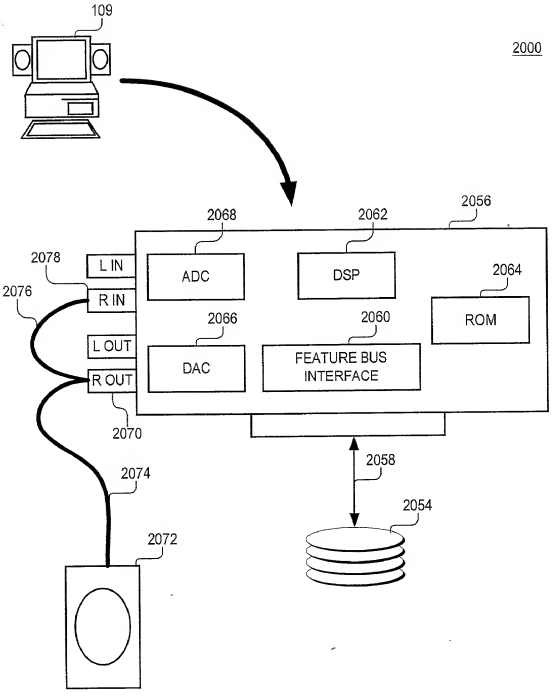

109
2000
2068
2062
2056
2078
L IN
ADC
DSP
2064
2076
R IN
ROM
2066
2060
L OUT
DAC
FEATURE BUS INTERFACE
R OUT
2070
2058
2074
2054
2072

FIG. 20

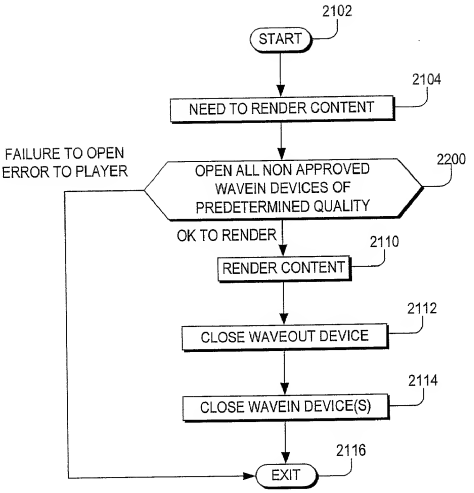

2100
2102
START
2104
NEED TO RENDER CONTENT
FAILURE TO OPEN
ERROR TO PLAYER
OPEN ALL NON APPROVED
WAVEIN DEVICES OF
PREDETERMINED QUALITY
2200
OK TO RENDER
2110
RENDER CONTENT
2112
CLOSE WAVEOUT DEVICE
2114
CLOSE WAVEIN DEVICE(S)
2116
EXIT

FIG. 21

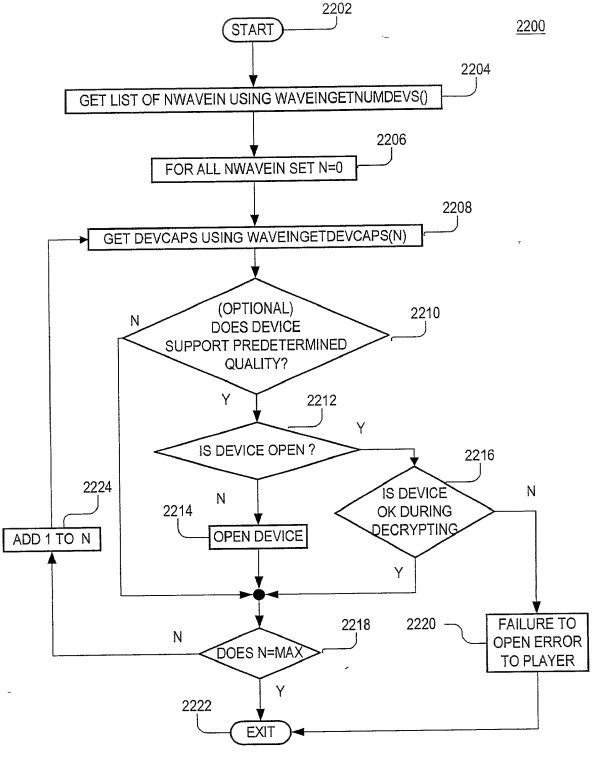

2200
START
2202
GET LIST OF NWAVEIN USING WAVEINGETNUMDEVS()
2204
FOR ALL NWAVEIN SET N=0
2206
GET DEVCAPS USING WAVEINGETDEVCAPS(N)
2208
(OPTIONAL) DOES DEVICE SUPPORT PREDETERMINED QUALITY?
2210
N
Y
IS DEVICE OPEN ?
2212
Y
N
OPEN DEVICE
2214
IS DEVICE OK DURING DECRYPTING
2216
N
Y
ADD 1 TO N
2224
DOES N=MAX
2218
N
Y
FAILURE TO OPEN ERROR TO PLAYER
2220
EXIT
2222

FIG. 22

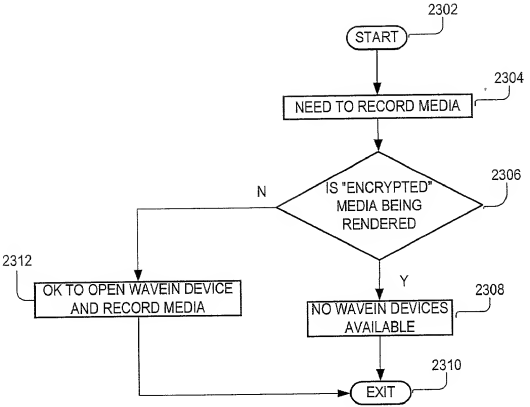

2300
2302
START
2304
NEED TO RECORD MEDIA
2306
IS "ENCRYPTED" MEDIA BEING RENDERED
N
Y
2312
OK TO OPEN WAVEIN DEVICE AND RECORD MEDIA
2308
NO WAVEIN DEVICES AVAILABLE
2310
EXIT

FIG. 23